

IN THE CLAIMS

Claims 1-6 (withdrawn)

7. (currently amended) A method of making pieces for a magnetic resonance imaging magnet comprising the steps of:

(a) providing an intermediate element including a plurality of substantially solid elongated ferromagnetic rods extending side-by-side in a lengthwise direction with a dielectric material therebetween; and

(b) slicing said intermediate element transverse to said lengthwise direction to form a plurality of shim pieces each having a thickness direction corresponding to the lengthwise direction of said rods in said intermediate element.

8. (original) A method as claimed in claim 7 further comprising the step of assembling a plurality of said shim pieces with a magnet pole to form a shim on said pole.

9. (original) A method as claimed in claim 8 wherein said assembling step is performed so as to form a shim in the form of a substantially closed shim ring.

10. (currently amended) A method as claimed in claim 8 wherein said shim pieces are assembled with gaps between said shim pieces forming said substantially closed shim ring.

11. (currently amended) A method as claimed in claim 8 wherein said intermediate element has a generally arcuate shape in a section transverse to said longitudinal direction of said rods, whereby said shim pieces are generally arcuate.

12. (original) A method as claimed in claim 8 wherein said shim pieces all have substantially equal thickness.

13. (original) A method as claimed in claim 7 wherein said step of slicing said intermediate element includes cutting through the intermediate element with a saw.

14. (original) A method as claimed in claim 7 further comprising the step of trimming said shim pieces to alter the profiles of said shim pieces in a plane transverse to the thickness of said shim pieces after said slicing step forming a general arcuate form.

15. (original) A method as claimed in claim 14 wherein said trimming step includes cutting through the shim pieces with an abrasive jet.

16. (original) A method as claimed in claim 14 wherein said trimming step includes using a milling machine.

17. (original) A method as claimed in claim 7 wherein said step of providing an intermediate element includes cleaning said rods of any oily residue or other contaminants.

18. (original) A method as claimed in claim 7 wherein said step of providing an intermediate element including roughening said rods and removing oxides, dirt or any other contaminants from surfaces of said rods.

19. (currently amended) A method as claimed in claim 7 wherein said step of providing an intermediate element ~~including~~ includes covering said rod with a dielectric sleeve.

20. (original) A method as claimed in claim 7 wherein said step of providing an intermediate element includes placing said rods in a mold and curing said dielectric around said rods in said mold.

21. (original) A method as claimed in claim 20 wherein said dielectric includes an epoxy.

22. (original) A method as claimed in claim 20 wherein said dielectric is placed between a dielectric sleeve and said rod.

23. (original) A method as claimed in claim 20 wherein said dielectric sleeve is a fiberglass sleeve.

24. (original) A method as claimed in claim 7 wherein said rods are substantially hexagonal in cross-sectional shape.

Claims 25-32 (withdrawn)

33. (new) A method of making shim pieces for a magnetic resonance imaging magnet comprising:

providing an intermediate element including a plurality of elongated ferromagnetic rods extending side-by-side in a lengthwise direction with a dielectric material therebetween;

slicing the intermediate element transverse to the lengthwise direction to form a plurality of shim pieces each having a thickness direction corresponding to the lengthwise

direction of the ferromagnetic rods in the intermediate element;
and

assembling a plurality of the shim pieces on a pole of the magnetic resonance imaging magnet to form a shim on the pole.

34. (new) A method as claimed in claim 33 wherein said assembling step is performed so as to form a shim in the form of a substantially closed shim ring.

35. (new) A method as claimed in claim 34 wherein the shim pieces are assembled with gaps between the shim pieces forming the substantially closed shim ring.

36. (new) A method as claimed in claim 33 wherein the intermediate element has a generally arcuate shape in a section transverse to the longitudinal direction of the rods and whereby the shim pieces are generally arcuate.

37. (new) A method as claimed in claim 33 further comprising the step of trimming the shim pieces to alter the profiles of the shim pieces in a plane transverse to the thickness of the shim pieces after the slicing step forms a general arcuate shape.

38. (new) A method as claimed in claim 37 wherein said trimming step includes cutting through the shim pieces with an abrasive jet.

39. (new) A method as claimed in claim 37 wherein said trimming step includes using a milling machine.

40. (new) A method as claimed in claim 33 wherein said step of providing an intermediate element includes covering said rod with a dielectric sleeve.

41. (new) A method as claimed in claim 33 wherein said step of providing an intermediate element includes placing the ferromagnetic rods in a mold and curing the dielectric material around the ferromagnetic rods in the mold.

42. (new) A method as claimed in claim 41 wherein the dielectric is placed between a dielectric sleeve and the rod.

43. (new) A method as claimed in claim 41 wherein the dielectric sleeve is a fiberglass sleeve.

44. (new) A method as claimed in claim 33 wherein said rods are substantially hexagonal in cross-sectional shape.